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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/957,014
Filing Date: September 20, 2001
Appellant(s): RUSSELL ET AL.

Paul C. Gosnell (Reg. No. 56,735)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 3, 2006 appealing from the Office action mailed 10/04/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

6,810,420	BUSE et. al.	10-2004
6,115,545	MELLQUIST	09-2000
6,061,739	REED et. al.	05-2000

CHESHIRE, S.,, et. al., "CURRENT MEETING REPORT", (March 1999).

TROLL, R., "REQUEST FOR COMMENTS: 2563", May 1999.

(8a) Extra/Extrinsic Reference or Evidence Used To Show an Inherent Characteristic of the Thing Taught by the Applied Reference(s) relied upon in the rejection of claims under appeal.

The following extrinsic evidence makes clear that the missing descriptive matter is necessarily present in the thing described in the reference(s), and that it would be so recognized by persons of ordinary skill (see MPEP 2131.02 II, See MPEP § 2124).

(a) **NEWTON'S TELECOM DICTIONARY**, The Official Dictionary of Telecom., Harry Newton, 14th Expanded & Updated Ed., March 1998, Flatiron Publishing, pages 33, 60, 372, 487 and 492.

(b) **RFC 826: AN ETHERNET ADDRESS RESOLUTION PROTOCOL** (incorporated by Appellant as evidence appendix, p. 71-80 of brief and/or prior art of record, see reference labeled "X" on PTO-892 mailed 7/25/03), David C. Plummer, Nov. 1992.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 1, 9-10, 17 and 25 are rejected under 35 U.S.C. §103(a) as being obvious over Buse et. al. (US 6,810,420) referred to as Buse hereafter in view of Cheshire et. al. (Cheshire), dated 03/1999.

Regarding claim 1, Buse teaches a scheme for allocating over a network an IP address to a device (col 3/lines 5-8), including assigning an IP address to a device (Fig. 2), the scheme including

a computer (2 or 3) and a device communicatively coupled to network (1) (Figs. 1-2, col 1/lines 38-45, col 2/lines 28-36), thereby said network providing communicative interconnection between said computer and said device;

said computer assigning said internet protocol address to said device over the network (col 3/lines 5-8, 16-19, col 2/lines 46-49, 50-54), including

automatically generating an IP address (step 36 of Fig. 3) (col 4/lines 1-3);

determining that the IP address is in use (steps 37-38 of Fig. 3) (col 3/lines 38-40);

sending a request using either an address resolution protocol or an ICMP to determine if the IP is in use, i.e. testing for conflict with any existing addresses (col 3/lines 40-col 4/line 10);

wherein if said IP address is not in use or free, then assigning said IP address to said device via the network (step 34 of Fig. 3) (col 4/lines 38-40) and configuring the device with said IP address (col 3/lines 26-28); although Buse teaches configuring the device with the IP obtained over the network from the proxy computer, he does not teach that a network adapter associated with a network device is assigned an internet protocol address.

Cheshire discloses the configuration a new devices connected to a network by configuring the IP addressing and other stack parameters, thereof, including configuring the device's interface with and IP address (pages 2-3); disclosing incorporating a randomly generated internet protocol address in an address resolution protocol (ARP) probe (page 3); sending said ARP probe (i.e. broadcast query) on said network for verify whether a response (by a communicatively coupled recipient) to said ARP probe indicates that said internet protocol

address is in use or not (page 3); and if said internet protocol address is not in use, then assigning said internet protocol address to said network interface via said (LAN) network (page 3).

It would have been obvious to one ordinary skilled in the art at the time the invention was made given the suggestions of Buse for configuring over a network a device coupled thereto with an IP address using an address resolution protocol, to include the use of a probe and assign the IP address to the device's network interface which connects the device to the network. Each device connected to the network is uniquely identified by its connection to network, this single connection is represented by the IP address which provides access for all other devices systems connected to the network, thereby, it is obvious to one ordinary skilled in the art, that the network adapter (network interface or NIC) is assigned this IP address as exemplified in the Cheshire reference. One would be motivation to combine the references because each reference was directed to allocating an IP address to a device with minimal user intervention, one ordinary skilled in the are would be motivated to combine the teachings of the references.

Regarding claim 9, said device is a printer (Cheshire: page 5).

Regarding claim 10, said network adapter is a (called "low-cost adapter"), i.e. network interface or adapter (see Cheshire: page 3).

Regarding claim 17, this claim comprised a network based ("imaging") system, including limitations on claim 1 when combined including the instructions executable on a computer to perform the method steps disclosed on the method claim 1, same rationale of rejection is applicable.

Regarding claim 25, this apparatus (system) claim is substantially the same as the method claim 10, same rationale of rejection is applicable.

2. Claims 2-6 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buse in view of Cheshire in further view of Reed et. al. (Reed) U.S. Patent No. 6,061,739.

Regarding claim 2-5, iterating i.e. repeating said generating step, said incorporating step, said sending step and said determining step for at least a predetermined number of times (Cheshire page 3), however Cheshire does not explicitly teach wherein the predetermined number is 30;

Reed teaches a first host computer incorporating a generating an internet protocol address in a address resolution protocol probe broadcast request (col 2/lines 20-30);

sending said address resolution on an Ethernet LAN network for determining if an internet protocol address is in use (col 2/lines 20-30); and wherein the number of requests is a preset threshold (col 4/lines 19-20) and first specified time interval to wait for a response are programmable values (col 5/lines 28-33).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to include means for repeating said generating step, said incorporating step, said sending step and said determining step for at least a predetermined number of times (e.g. 30), motivation would be to program the number of request issues and the time to wait for a response based on network environment factors such as network latency and its dependency on network traffic, distance and the characteristic of the communication links.

Regarding claim 6, if said number of times said generating step is performed exceeds said predetermined number then said computer fails to automatically assign said network adapter an internet protocol address (Cheshire: page 3).

Regarding claims 18-22, these apparatus (system) claims are substantially the same as the method claims 2-6 respectively, same rationale of rejection is applicable.

3. Claims 7, 11-16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buse in view of Cheshire in further view of Mellquist U.S. Patent No. 6,115,545.

Regarding claim 7, although the above-mentioned prior art discloses sending an ARP probe message (i.e. "broadcasting discovery packet") on said network; and determining if said network adapter has a "valid" internet protocol address, it does not explicitly teach determining if internet protocol address is valid.

Mellquist teaches that in order to configure a device with an internet protocol address it is required that a free address in the range of valid unique addresses must be selected and that a sub-net mask having a mask that must be the same on all entities across the sub-net is required (col 3/lines 11-19);

It would have been obvious to one ordinary skilled in the art at the time the invention was made to ensure that a unique valid internet address is used to configure a network device, as taught by the reference, where such validation includes verifying that an internet protocol address having the same mask as all entities on the subnet, motivation would be verify that applied address meet all requirements that ensure proper operation, to avoid major problems as suggested by Mellquist.

Regarding claim 11, this claim is substantially the same as claims 1 and 7 as discussed above, same rationale of rejection is applicable.

Regarding claim 12, wherein if said internet protocol address is in use, then further comprising the step of repeating said generating step, said incorporating step, said sending step and said determining step (Cheshire, page 3).

Regarding claims 13-16, these claims are substantially the same as claims 3-6 respectively, same rationale of rejection is applicable.

Regarding claim 23, this apparatus (system) claim is substantially the same as claim 7, same rationale of rejection is applicable.

4. Claims 8 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buse-Cheshire in view of Mellquist in further view of Request for Comments (2563), Troll, May 1999

Regarding claim 8, however the above-mentioned prior art of record does not explicitly teach determining whether said network allows said computer to assign an internet protocol address to network devices, prior to generating step;

Troll teaches client nodes configured to be able to determine whether or not the network is being centrally administrated, allowing it determine whether or not it should assign itself a IP (link-local) address (page 2), including an Auto-configure option which allows a computer node to determine whether or not it should generate an IP address (page 3) (i.e. prior to performing the generating step).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to utilize the Troll teachings to implement determining whether said network allows said computer to assign an internet protocol address to said network adapter, motivation would be to enable the flexibility of an Auto-configure Option along with the IP address assignment that notifies the client that the network does not have an IP address to offer upon determining the absence of an DHCP server.

Regarding claims 24, this apparatus (system) claim is substantially the same as claim 8, same rationale of rejection is applicable.

(10) Response to Arguments

A. Arguments regarding claims 1, 9-10, 17 and 25 rejected under 103(a) as being unpatentable over Buse et. al. in view of Cheshire.

1. Regarding claim 1, it is argued (p. 16) that claims may not be properly interpreted to encompass a method of obtaining an IP address via either a DHCP request or Automatic Private IP addressing, as disclosed by Buse. Because, according to appellant the claimed invention is directed to a method by which a device on a compute network can be assigned an IP address automatically, *without the overhead of supporting the traditional address assignment protocols, such as DHCP, within the devices themselves.*

In response to Appellant's argument that the references fail to show certain features of the invention, it is noted that the features upon which Appellant relies (i.e., "*assigned an IP address automatically, without the overhead of supporting the traditional address assignment protocols, such as DHCP, within the devices themselves*" nor "*generating an internet protocol address not from picking up a random address using Automatic Private IP addressing"*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In this case, the method of claim 1 reads "comprising the steps of:...*generating an internet protocol address*", thus the transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and *does not* exclude additional, unrecited elements or method steps. See, e.g., Mars Inc. v. H.J. Heinz Co., 377 F.3d 1369, 1376, 71 USPQ2d 1837, 1843 (Fed. Cir. 2004) (see transitional phrases MPEP 2111.03). It is respectfully noted that (at least) claim 1 is silent with respect as to how the internet protocol address is generated, thus does not exclude the "overhead" appellant makes reference to.

2. Regarding claim 1, it is argued (p. 14-16) that the applied prior art does not teach claim limitation as recited. Specifically, although Buse teaches a server or proxy computer providing a device with an IP address, i.e. providing an IP address from a server or a proxy computer (p. 13),

according to Appellant, it does not incorporate the IP address in an address resolution protocol ARP probe, send the ARP probe on the network, determine whether a response to the probe indicated that the IP address is in use and assign the IP address to the network adapter via the network if the IP address is not in use, as recited on claim 1.

According to Appellant (p. 13), Cheshire does not make up for the deficiency of Buse, because although Cheshire, discloses automatic IP address assignment for a link local address with IPv4 (page 1), specifically the IPv4 self-configuration as currently implemented by Apple and MS (bottom paragraph of page 2). Operation as implemented in Mac OS 8.5 includes using a DHCP discover, and if no DHCP server is discovered, picking random address, sending an ARP probe to verify that the address is not already in use, and if the address is in use, iterating the picking and repeating steps 10 times at most, otherwise configuring the computer's interface with the IP address (page 3). Thus, Cheshire discloses a computer obtaining for itself an IP address, it is directed to self configuration, meaning that it does teach a computer providing an device with an IP address, according to appellant.

In response to the above argument, appellant's argument has been carefully considered. However, the Cheshire reference has not been introduced in the rejection to teach a computer automatically assigning an internet protocol address to a device, because that is already taught by the Buse reference, which seems to be conceded by Appellant (p. 13). Thus, the deficiencies noted in the Buse reference are not the failure to teach a computer automatically assigning an internet protocol address to a device. The Cheshire reference has not been introduce to make up for the deficiency of Buse for not teaching "providing an IP address for another device" (as argued).

Buse teaches using a request/reply mechanism (see their definitions) such as address resolution protocol (ARP) or ICMP echo request for testing the generated address to determine if the generated address is conflicting with any existing address. Specifically, the proxy computer is configure to assign (allocate) IP addresses to devices using Automatic by generating automatically an IP Address (stage 36), and testing the address for conflict with any existing addresses (stage 37). This may be done by means of an address resolution protocol (ARP) or an ICMP echo *request*. If there is a conflict, i.e. with an existing occupied address (stage 38) this sub process (stages 36-38) is repeated. Every time stage 36 is entered a new

address is generated from the auto IP range for testing in stage 37. This cycle will continue until a free address is found (column 3, lines 40 to column 10).

Thus, Buse teaches a proxy computer configuring a device coupled to the network by providing it with an internet protocol address generated by the proxy computer. The proxy computer testing the generated IP address by sending a request (ICMP or ARP) to see if an IP address is in use, using ARP or an ICMP *request* (i.e. incorporate the IP address in a request "ARP probe") over the network to determine (by the replies) whether that the IP address is in use and assign the IP address to the network adapter via the network if the IP address is not in use. ARP and ICMP are request/reply mechanisms (see extrinsic evidence on item (8a) above). Note: The request sent out to the network, particularly under Address Resolution Protocol contains the internet protocol address, see definition of ARP on page 60, defined by *Newton's Dictionary*, listed as extrinsic evidence on item (8a) above, defining where "an ARP request with the IP address is broadcast onto the network", and *RFC 826: An Ethernet Address Resolution protocol* (also incorporated by Appellant as evidence appendix, p. 71-80 of brief and/or prior art of record, reference labeled "X" on PTO-892 mailed 7/25/03), David C. Plummer, Nov. 1992, which states "that the target protocol address *is necessary in the request form of the packet* in order for the target to send a reply", see the 7th page of this reference).

Buse teaches assigning the generated internet protocol address if free to the network device coupled to the network by another computer. Specifically, the proxy computer sends the network device a declaratory message, including the allocated (assigned) IP address (column 2, lines 50-64), the device using the assigned internet protocol address (column 1, lines 21-25).

Buse teaches the limitation of claim 1, including said computer assigning said internet protocol address to said device over the network (col 3/lines 5-8, 16-19, col 2/lines 46-49, 50-54), including

automatically generating an IP address (step 36 of Fig. 3) (col 4/lines 1-3);

determining that the IP address is in use (steps 37-38 of Fig. 3) (col 3/lines 38-40);

sending a request using either an address resolution protocol or an ICMP request to determine if the IP is in use, i.e. testing for conflict with any existing addresses (col 3/lines 40-col 4/line 10);

wherein if said IP address is not in use or free, then assigning said IP address to said device via the network (step 34 of Fig. 3) (col 4/lines 38-40) and configuring the device with said IP address (col 3/lines 26-28); although Buse teaches configuring the device with the IP obtained over the network from the proxy computer, he does not teach that a network adapter associated with a network device is assigned an internet protocol address.

Cheshire discloses the configuration a new devices connected to a network by configuring the IP addressing and other stack parameters, thereof, including configuring the device's interface with and IP address (pages 2-3); disclosing incorporating a randomly generated internet protocol address in an address resolution protocol (ARP) probe (page 3); sending said ARP probe (i.e. broadcast query) on said network for verify whether a response (by a communicatively coupled recipient) to said ARP probe indicates that said internet protocol address is in use or not (page 3); and if said internet protocol address is not in use, then configure the interface with the internet protocol address and start using the interface (page 3).

In this manner, the applied prior art teaches argued limitations, namely, incorporating the IP address in an address resolution protocol ARP request (so called "probe"), send the ARP probe on the network, determine whether a response to the probe indicated that the IP address is in use and assign the IP address to the network adapter via the network if the IP address is not in use, as recited on claim 1.

3. Regarding claim 1, it is argued (p. 17) that the applied prior art does not teach claim limitation as recited. Specifically, because the network adapter in claim 1 is not associated with the computer that performs the assigning of the IP address but is in communication with the computer via a network. In contrast, according to Appellant, in the Cheshire reference, the steps in the MAC OS are for a computer to configure its *own* interface with an IP address.

In response to the above argument, appellant's argument has been carefully reviewed. [AS BEST UNDERSTOOD], the Buse reference relates to the allocation of a protocol (IP) address to a device newly connected into the network. Buse teaches a computer providing an IP address to another computer over the network (it seems that appellant concedes to this) to a network device coupled to the network.

In the Buse reference, the device to which an IP address is assigned by the proxy computer has a network adapter that is not "associated" with the proxy computer that performs the assigning of the IP address but (the network adapter) communicated with the proxy computer over the network. Specifically, the Buse reference teaches where the device to which a proxy computer provides an IP address is coupled to the network (see Figures 1-2). Both the proxy computer and network device are coupled to the network (see Figs. 1-2, column 1, line 38 to column 2, line 7) and both the proxy computer and network device communicate through the network (see Figs. 1-2, column 1, line 38 to column 2, line 7). Particularly, the network device is configured to see communications from the proxy device (e.g. an interrogation) and reply. The proxy computer based on the content of the reply can determine of the responding device has an IP address or not (see Buse column 2, lines 23-45).

Thus, the network device is communicatively coupled to the network and configured to communicate with other devices on the network. One of ordinary skill in the art would recognize and/or it will be readily apparent to one of ordinary skill that the network device (in the Buse reference) is associated with network adapter, which enables the device to communicate with other devices over the network, because by definition that is what a network adapters does, see *Newton's Dictionary*, listed as extrinsic evidence on item (8a) above. Namely, see the definition of the term "network interface card" on page 492. Specifically, the definition of the term "adapter" is (i) "a device used to connect a terminal to some circuit or channel...", and (ii) also defined as "another name for a network interface card (NIC)" as card with fits into a computer and *joins* the computer to a local area network" see page 33. Definition of the term "interface" is an mechanical or electrical link *connecting* two or more pieces of equipment together, see page 372. Definition of the term "network interface device" as a device *required for communications* to and from a network, "network interface card" as an electronic circuitry *connecting* a workstation to a network, "network interface unit", a communications controller that *attaches* to a local network, it implements the local network protocols and *provides an interface for device attachment*, see page 487. Definition of the term "network interface card" as *attachment that connects a device to a network*, see page 492 of *Newton's Dictionary*.

The network device in the Buse reference is communicatively coupled to the network and configured to communicate with other devices on the network and via the network. The network

device is associated with network adapter which couples a device to the network (also known as a *network interface* or *network interface card* see term definition on page 492, further see definition of the terms *network interface*, *network interface card*, *network interface controller* and *network interface device* on page 487, see definition of the term *interface* on page 372 and see definition of the term *adapter* and *adapter card* on page 33, as defined by *Newton's Dictionary*, listed as extrinsic evidence on item (8a) above). The network interface associated with a device "interfaces" communication between the device and the network, particularly for enabling the device to communicate with other devices over the network coupling/connecting the device to the network.

Thus, Buse teaches argued limitation, namely, a network device (claim 1) that is not associated with the proxy computer that performs the assigning and providing of the IP address, the network device is in communication with the proxy computer via a network, as shown in Figs. 1-2. The network device communicatively coupled to the network and configured to communicate with other devices on the network, in the Buse reference, is associated with a network adapter which couples the device to the network. The proxy computer communicatively coupled to the network and configured to communicate with other devices on the network, in the Buse reference, is associated with a network adapter which couples the proxy computer to the network.

The proxy computer assigns over the network an IP address to the network device coupled to the network. Buse does not teach where a network adapter associated with a device is assigned an internet protocol address. Cheshire has been introduced for teachings where a network adapter associated with a device is assigned an internet protocol address (p. 2-3).

4. Regarding claim 1, it is argued (p. 18) that there is no motivation to combine the teachings of Cheshire, i.e. self-configuration with the teachings of Buse allocation of an IP address to a device by a proxy computer, because according to appellant each is a different approach in obtaining IP address.

In response to the above-mentioned argument, appellant's point has been carefully considered. However, (i) Cheshire describes an operation which attempts to discover an DHCP server providing an alternative method if no DHCP server is discovered on the network, thus

teachings of Cheshire would complemented a method for obtaining an IP address from another computer, i.e. when a DHCP server computer is not available on the network, because its suggested by the reference itself. Cheshire (ii) teaches generating an internet protocol address, determining whether the address is in use via ARP probe, stating that this "ARP probe *(ala DHCP conflict detection)"* is used to verify the address is not in use (see p. 3). Thus, the ARP probe mechanism is described to be used in DHCP conflict detection. It would have been obvious to one of ordinary skill in the art at the time the invention was made that a computer, i.e. DHCP server implementing DHCP was configured to use a conflict detection ARP probing based because in doing it determines whether the IP address is current or not in use, means for conflict detection, as suggested by Cheshire.

Arguments that the so called different approach(es) in obtaining an IP address would not have been obvious to one of ordinary skill in the art have been fully considered but are found not persuasive in view of the teachings in the references which seem to invoke complementary usage.

5. Regarding claims 9 and 10, it is argued (p. 20) that these claims are allowable according to appellant because of their dependency with claim 1.

In view of the above-assertion, hence, response to arguments with respect to claim 1 would therefore be applicable to claims 9 and 10 based on their dependency thereon.

6. Regarding claim 17, it is argued (p. 20-22) besides for the same reasons set forth above with respect to claim 1, that although Cheshire mentions printers, Cheshire does not teach a network adapter communicatively coupling an image device to the network, the network providing communicative interconnection between the computer and the network adapter.

In response to the above-mentioned argument, claimed interpretation particularly with respect to the interpretation of the claimed term "image device" has been fully considered. According to the invention's disclosure: the networked device (14) may be an imaging device, such as a printer. In the embodiment of the invention described herein, networked device (14) will be in the form of a printer [see lines 18-20 on p. 3]. The broadest reasonable interpretation

has been applied to the claims as mandated, thereby, claimed "imaging device", for the purposes of examination given the broadest reasonable interpretation is a network device.

In this case, the applied prior art teaches a computer and a device communicatively coupled to network (Buse: Figs. 1-2, col 1/lines 38-45, col 2/lines 28-36). Specifically, Buse teachings relate to assignment/allocation of a protocol (IP) address to a device newly connected into the network (column 1, lines 5-10). Buse teaches on Figure 1, a multiplicity of interconnected device, such computers (2, 3) and device (4) coupled to a local area network (1), particularly, user terminal (2) hosting DHCP and also an automatic private IP addressing scheme, computer (3) is a PC. The network device communicated with the proxy computer over the network as shown on Figs. 1-2. Buse teaches claimed computer communicatively coupled to a network, the network providing interconnection between the computer and the network devices also coupled to the network (see Figs. 1-2).

In the Buse reference, the device to which an IP address is assigned by the proxy computer has a network adapter that is not "associated" with the proxy computer that performs the assigning of the IP address but (the network adapter) communicated with the proxy computer over the network. Specifically, the Buse reference teaches where the device coupled to the network to which a proxy computer which provides an IP address to the network device is coupled. Both the proxy computer and network device are coupled to the network (see Figs. 1-2, column 1, line 38 to column 2, line 7). The network device is configured to see communications from the proxy device (e.g. an interrogation) and reply. The proxy computer based on the content of the reply can determine of the responding device has an IP address or not (see column 2, lines 23-45).

Thus, the network device is communicatively coupled to the network and configured to communicate with other devices on the network. One of ordinary skill in the art would recognize or it will be readily apparent to one of ordinary skill that the network device (in the Buse reference) is associated with network adapter, which enables the device to communicate with other devices over the network, because by definition that is what a network adapters does, see *Newton's Dictionary*, listed as extrinsic evidence on item (8a) above. Namely, for example, the definition of *network interface card* on p 492.

Because the network device in the Buse reference is communicatively coupled to the network and configured to communicate with other devices on the network and via the network. The network device is associated with network adapter (also known as a network interface or network interface card, see definitions), which couples it to the network. The network interface associated with a device "interfaces" communication between the device and the network, particularly for enabling the device to communicate with other devices over the network.

> In a computer network, devices are coupled to the network via a network adapter also known as network interface or network interface card, the adapter or interface is coupled between a device and the network for handle data between the network and the device. (see the definition for namely, network interface card on p. 492 as defined by *Newton's Dictionary*, listed as extrinsic evidence on item (8a) above).

Arguments that the prior art does not teach where the network provides communicative interconnection between the computer and the network adapter, have been fully considered but not rendered persuasive in view of the teachings of the applied prior art.

7. Regarding claim 25, it is argued (p. 23) that claim 25 is patentable due to its dependency on otherwise base claim 17.

In response to the above-assertion, response to arguments with respect to claim 17 would therefore be applicable to claim 25 based on its dependency thereon.

B. Claims 2-6 and 18-22 rejected under 103(a) as being unpatentable over Buse in view of Cheshire in further view of Reed.

8. Regarding claims 2-6 and 18-22, it is argued (p. 26) that the applied prior art does not teach the argued limitation of claim 1, namely, "since Reed does not overcome the deficiency of Buse and Cheshire as applied to claim 1, the combination of Buse, Cheshire and Reed would not yield Appellant's claimed invention".

In response to the above argument, response to arguments regarding claim 1, discussed above, may therefore be equally applicable to this argument with respect to claims 2-6 and 18-22 based on the rationale set forth by Appellant regarding these claims.

9. Regarding claims 2-6 and 18-22, it is argued (p. 27) that the applied prior art does not teach the argued limitation of claim 1, namely, since Reed is directed to and discloses self-configuration, for substantially the same reasons as set forth above with respect to claim 1 regarding Buse and Cheshire, it would not be obvious to combine the teachings of Cheshire with Reed, see item 8 above.

In response to the above argument, Appellant's interpretation of the applied art has been considered. Appellant's arguments with respect to claims 2-6 and 18-22 are directed to claim 1, thus same rationale of rejection and/or response to argument may be equally applicable based on the argument set forth by Appellant.

10. Regarding claims 2-6 and 18-22, it is argued that there is no motivation to combine the Reed reference with neither Buse nor Cheshire since the Reed reference is directed to self-configuration.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Reed teaches a first host computer incorporating a generating an internet protocol address in a address resolution protocol probe broadcast request (col 2/lines 20-30);

sending said address resolution on an Ethernet LAN network for determining if an internet protocol address is in use (col 2/lines 20-30); and wherein the number of requests is a preset threshold (col 4/lines 19-20) and first specified time interval to wait for a response are programmable values (col 5/lines 28-33).

It would have been obvious to one ordinary skilled in the art at the time the invention was made given the suggestion of Cheshire when a computer on the network is not available for providing an internet protocol address to a device newly coupled to the network for assigning a internet protocol address to device including determining if the generated address is in use by using address resolution protocol the teachings of Reed for also using address resolution

protocol would be readily apparent. Motivation would be to program the number of request issues and the time to wait for a response based on network environment factors such as network latency and its dependency on network traffic, distance and the characteristic of the communication links, as suggested by Reed.

11. Regarding claims 18-22 rejected on the same basis as claims 2-6, as being unpatentable over Buse in view of Cheshire in further view of Reed, it is argued (p. 29) the claims 18-22 are allowable for the substantially the same reasons as set forth above with respect to claims 2-6. Namely, (i) "since Reed does not overcome the deficiency of Buse and Cheshire as applied to claim 1, the combination of Buse, Cheshire and Reed would not yield Appellant's claimed invention", see item 7 above and (ii) namely, since Reed is directed to and discloses self-configuration, for substantially the same reasons as set forth above with respect to claim 1 regarding Buse and Cheshire, it would not be obvious to combine the teachings of Cheshire with Reed, see item 8 above.

In response to the above argument, because the arguments with respect to claims 18-22, make reference to the arguments presented to claims 2-6 and because the arguments with respect to claims 2-6 make reference to the arguments with respect to claim 1. Response to arguments with respect to claim 1 is equally applicable to claims 2-6 and therefore claims 18-22, discussed above.

C. Claims 7, 11-16 and 23 rejected under 103(a) as being unpatentable over Buse in view of Cheshire in view of Mellquist

12. Regarding claim 7, it is argued (p. 31-33) that Mellquist does not over come the deficiency of Buse in view of Cheshire, as applied to claim 1, claim 7 is believed, according to Appellant allowable over claim 1.

In response to the above-mentioned argument, Appellant's interpretation of the applied prior art has been reviewed. Since, argument hereby presented does not seem to address claim limitation pertaining to claim 7, but argued "the deficiencies of Buse in view of Cheshire", as applied to claim 1, response to arguments with respect to claim 1 regarding "the deficiencies of

Buse in view of Cheshire", namely, section A (items 1 through 7 above) would be equally applicable base on Appellant's rational.

13. Regarding claim 7, it is argued (p. 34-36) that the applied prior art Mellquist does not teach determining if the network adapter has a valid internet protocol address, as recited on claim 7, because according to Appellant, Mellquist does not find out if the address is valid by investigation, comparison with known values, reasoning or calculation, as would constitute "determining if the network adapter has a valid internet protocol address", in light of the disclosure pointed out by Appellant, namely, page 5, lines 25-32.

In response to the above-mentioned argument, Appellant's assertion as to how the claimed clause "determining if the network adapter has a valid internet protocol address" should be interpreted in light of the indicated disclosure has been fully considered.

In this case, Buse teaches a network device having associated a network adapter to which an internet protocol address is assigned, as discussed on items 2-4 of section A.

Buse discloses wherein the computer configured to provide an internet protocol address communicates with the network device, namely, send an interrogation, the devices that see such an interrogation will respond with a reply, namely, the device will return its MAC address, and unconfigured devices will respond with an IP address field set to a convenially invalid value such as 0.0.0.0 (column 2, lines 23-45).

Thus Buse teaches determining [as defined by Appellant], i.e. finding out if the address is valid by comparison of the replied values with known values, e.g. 0.0.0.0.

14. Regarding claim 11, it is argued (p. 38) that Buse in view of Cheshire in further view of Mellquist do not disclose claim limitation as recited. Namely, "determining if the low-cost network adapter has a valid internet protocol address", it is believed according to Appellant that claim 11 is allowable for the same reasons set forth above with respect to claims 1 and 7.

In response to the above argument, response to the argument that the applied references fail to teach determining if the low-cost network adapter has a valid internet protocol address have been addresses, see item 13 above. Response to arguments regarding claim 1 have been addressed above on items 2-4 of section A, discussed above.

15. Regarding claims 12-16, it is argued (p. 39) that claims 12-16 depend directly from claim 11, thus claims 12-16 are believed according to Appellant allowable due to their dependence on otherwise allowable base claim 11, believed according to be allowable for the same reasons set forth above with respect to claims 1 and 7.

Thus, response to the argument with respect to claim 7, that the applied references fail to teach determining if the low-cost network adapter has a valid internet protocol address have been addresses, see item 13 above. Response to arguments regarding claim 1, has been addressed above on items 2-4 of section A, discussed above same response would be applicable.

16. Regarding claim 23, it is argued (p. 39) that this claim is directed to the system of claim 17, for substantially the same reasons as set forth with respect to claim 7, Appellant believes claim 23 is allowable in addition due to its dependency on otherwise claim 17.

In response to the above-mentioned argument, response to argument with respect to claim 7, that the applied references fail to teach determining if the low-cost network adapter has a valid internet protocol address, has been addressed, see item 13 above. Response to arguments regarding claim 17, noted by Appellant as being allowable for the same reasons as set forth with respect to claim 1 (see p. 21), thus response to arguments with respect to claim 1 have been addressed above on items 2-4 of section A, discussed above, same response would be applicable.

17. Regarding claims 8 and 24, it is argued (p. 40-41) that claim 8 is directed to the method of claim 7, and depends from claim 7, which depends from claim 1. As set forth above with respect to claim 7, the subject matter of claims 1 and 7 is not unpatentable over the applied Buse in view of Cheshire in further view of Mellquist.

In response to the above argument that claim 8 patentable for the same reasons set forth above with respect to claims 1 and 7, response to arguments with respect to claims 1 and 7 is equally applicable. Namely, response to argument with respect to claim 7, that the applied references fail to teach determining if the low-cost network adapter has a valid internet protocol address, has been addressed, see item 13 above. Response to arguments regarding claim 1 have been addressed above on items 2-4 of section A, same response would be applicable.

18. Regarding claim 8, it is argued (p. 45) that rejection has relied on a combination of four (4) reference, in the manner set forth to reject claim 8, supports Appellant's present combination of impermissible hindsight reconstruction of Appellant's invention using Appellant's claims as blueprint.

In response to Appellant's argument that the examiner has combined an excessive number of references, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

Regarding claim 24, it is argued (p. 45-46) the claim was rejected on the same basis as claim 8, thus Appellant believes it is allowable for the same reasons as set forth above with respect to claim 8.

In response to the above-mentioned argument, that claim 24 is patentable for the same reasons that claim 8 patentable, which states the same reasons set forth above with respect to claims 1 and 7, thus, response to arguments with respect to claims 1 and 7 is equally applicable. Further, namely, response to argument with respect to claim 7, that the applied references fail to teach determining if the low-cost network adapter has a valid internet protocol address, has been addressed, see item 13 above. Response to arguments regarding claim 1 have been addressed above on items 2-4 of section A, same response would be applicable.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

BEATRIZ PRIETO
PRIMARY EXAMINER

bp
May 04, 2006

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